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September 27, 2017

Diane Czarnecki
Industrial Hygienist
Facilities Management Division
GSA Public Buildings Service - Heartland Region
U.S. General Services Administration
2300 Main Street, Kansas City, MO 64108

RE: Goodfellow Federal Center
Metals in Settled Dust Sampling in Electrical Vaults
4300 Goodfellow Boulevard
St. Louis, Missouri 63120
OCCU-TEC Project No. 917004.002

Dear Ms. Czarnecki:

Thank you for the opportunity to assist the General Services Administration (GSA) with the metals in settled dust sampling investigation of the electrical vaults located at the Goodfellow Federal Center (GFC), in St. Louis, Missouri. OCCU-TEC understands that the purpose of the investigation was to provide additional sampling data regarding existing environmental conditions that are present at GFC that could adversely impact construction activities and maintenance workers at the facility. The following report summarizes the sample collection activities and the laboratory analytical results of samples submitted.

On September 7, 2017, a team of OCCU-TEC personnel including a Missouri licensed lead risk assessor conducted settled dust sampling for the presence of seven of the Resource Conservation and Recovery Act (RCRA) target metals (lead, arsenic, barium, cadmium, chromium, selenium, and silver) from various surfaces within the electrical vaults at representative locations throughout GFC. These sampling activities were conducted at the following buildings: 103, 103F, 104, 105, 107, 108A, 108B, and 110. The purpose of this testing was to determine the presence and concentration of these target metals in settled dust within the electrical vaults on both existing equipment surfaces as well as concrete floors.

The proposed sampling scheme, the number of samples, the sample distribution and general methodology was developed by GSA and OCCU-TEC. Specific sample locations were determined by OCCU-TEC field personnel on-site.

Metals in Settled Dust Sampling

Metals in settled dust sampling was completed from various surfaces within the vaults utilizing lead dust wipe sampling methodology.

Dust wipe sampling was conducted in accordance with ASTM Standard E1728-16: Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination. ASTM Standard E1728-16 is consistent with the methodology described in the Housing and Urban Development Guidelines and 40 CRF 745.63. The Brookhaven National Laboratory's Surface Wipe Sampling Procedure (IH75190) was also used as a guideline.

Dust wipe sampling for the target metals was conducted on a variety of representative surfaces that have the potential of being disturbed during planned maintenance or renovation projects within the electrical vaults. A representative surface area of approximately one square foot (1 SF) was measured and delineated with pre-fabricated, disposable templates. The dust wipe samples were collected using dedicated dust wipe cloths meeting ASTM standards. Each dust wipe cloth was pre-moistened and individually wrapped. Each sample was collected by wiping in a back and forth "S" pattern over a measured sampling area of approximately 1 SF. Then, the wipe was folded over itself and the area was wiped again in a direction perpendicular to the first wipe orientation. The wipe samples were then placed into labeled, clean laboratory-supplied plastic centrifuge tubes with screw on caps. Dust wipe samples were submitted to Sanair Technologies Laboratory Inc. (Sanair) in Powhatan, Virginia for Inductively Coupled Plasma (ICP) total analysis of metals analysis according to Environmental Protection Agency (EPA) method SW846 350B/7420.

Results of the dust wipe samples collected from the electrical vaults indicate that all the 72 samples contained concentrations of target metals above laboratory detection limits. The following table identifies the range of results for each of the seven metals that were sampled. **Samples with a "<" sign indicate that the results were below the reportable limit.**

Analysis	Lowest Concentration (µg/sq. ft.)	Highest Concentration (µg/sq, ft.)
Silver	<2.50	8.80
Arsenic	<2.50	20.7
Barium	3.24	740.00
Cadmium	<2.50	105.00
Total Chromium	<2.50	330.00
Lead	<2.50	10,370.00
Selenium	<2.50	36.50

Many of the samples collected contained target metals above the regulatory or recommended levels. Based on the results of the sampling, all the electrical vaults should be presumed to contain measurable levels of RCRA metals and proper precautions should be taken upon entry and exit of the vaults to protect workers and limit the spread of dust to the outside environment.

OCCU-TEC appreciates the opportunity to work with GSA on this project. If you have any questions concerning this report, or if we may be of any additional service, please feel free to contact us.

Sincerely,

Jeff T. Smith
Senior Project Manager

Jay Hurst
Director of Operations (QA/QC)

Appendices:

A - Sample Summary Table
B – Sample Location Maps
C - Laboratory Analysis Reports
D - Licenses

Appendix A

Sample Summary Table

Goodfellow Federal Center - Electrical Vault Wipe Sample Data						
Sample Number	**Location**	**Area Description**	**Analyte**	**Result**	**Units**	**Recommended Limit (*)**
103-1-1	Building 103 Electrical Vault 1	Upper Level - Electrical Vault Floor	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	270.00	µg/ft^2	
			Cadmium	5.70	µg/ft^2	27.9/1.9
			Chromium	28.00	µg/ft^2	
			Lead	234.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
103-1-2	Building 103 Electrical Vault 1	Upper Level - Top of Cabinet	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	68.00	µg/ft^2	
			Cadmium	5.48	µg/ft^2	27.9/1.9
			Chromium	5.20	µg/ft^2	
			Lead	183.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
103-1-3	Building 103 Electrical Vault 1	Vault Floor - Lower Level	Silver	5.20	µg/ft^2	139/9.3
			Arsenic	11.30	µg/ft^2	139/9.3
			Barium	243.00	µg/ft^2	
			Cadmium	9.60	µg/ft^2	27.9/1.9
			Chromium	54.40	µg/ft^2	
			Lead	609.00	µg/ft^2	250/40
			Selenium	12.80	µg/ft^2	
103-1-4	Building 103 Electrical Vault 1	Cabinet Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	182.00	µg/ft^2	
			Cadmium	10.60	µg/ft^2	27.9/1.9
			Chromium	18.50	µg/ft^2	
			Lead	477.00	µg/ft^2	250/40
			Selenium	2.69	µg/ft^2	
103-2-1	Building 103 Electrical Vault 2	Electrical Vault Floor Concrete - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	71.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	8.05	µg/ft^2	
			Lead	60.30	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
103-2-2	Building 103 Electrical Vault 2	Switch Board #506349 - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	213.00	µg/ft^2	
			Cadmium	13.70	µg/ft^2	27.9/1.9
			Chromium	20.10	µg/ft^2	
			Lead	1690.00	µg/ft^2	250/40
			Selenium	4.90	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
103-2-3	Building 103 Electrical Vault 2	Electrical Vault Floor Concrete - Lower Level	Silver	2.60	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	160.00	µg/ft^2	
			Cadmium	4.30	µg/ft^2	27.9/1.9
			Chromium	27.10	µg/ft^2	
			Lead	116.00	µg/ft^2	250/40
			Selenium	4.37	µg/ft^2	
103-2-4	Building 103 Electrical Vault 2	Switch Gear (Face) - Lower level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	11.60	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	12.10	µg/ft^2	250/40
			Selenium	2.50	µg/ft^2	
103-3-1	Building 103 Electrical Vault 3	Top of Duct SW Side - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	330.00	µg/ft^2	
			Cadmium	17.60	µg/ft^2	27.9/1.9
			Chromium	23.40	µg/ft^2	
			Lead	203.00	µg/ft^2	250/40
			Selenium	4.80	µg/ft^2	
103-3-2	Building 103 Electrical Vault 3	Electrical Vault Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	108.00	µg/ft^2	
			Cadmium	5.90	µg/ft^2	27.9/1.9
			Chromium	32.30	µg/ft^2	
			Lead	145.00	µg/ft^2	250/40
			Selenium	4.80	µg/ft^2	
103-3-3	Building 103 Electrical Vault 3	Transformer #508900 - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	132.00	µg/ft^2	
			Cadmium	5.34	µg/ft^2	27.9/1.9
			Chromium	16.70	µg/ft^2	
			Lead	98.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
103-4-1	Building 103 Electrical Vault 4	Electrical Vault Floor Concrete - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	62.00	µg/ft^2	
			Cadmium	3.80	µg/ft^2	27.9/1.9
			Chromium	13.30	µg/ft^2	
			Lead	94.30	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
103-4-2	Building 103 Electrical Vault 4	Dry Transformer #500848	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	2.90	µg/ft^2	139/9.3
			Barium	330.00	µg/ft^2	
			Cadmium	23.00	µg/ft^2	27.9/1.9
			Chromium	26.00	µg/ft^2	
			Lead	225.00	µg/ft^2	250/40
			Selenium	5.26	µg/ft^2	
103-4-3	Building 103 Electrical Vault 4	Dry Transformer #500848	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.30	µg/ft^2	139/9.3
			Barium	182.00	µg/ft^2	
			Cadmium	18.00	µg/ft^2	27.9/1.9
			Chromium	46.00	µg/ft^2	
			Lead	360.00	µg/ft^2	250/40
			Selenium	6.25	µg/ft^2	
103F-1-1	Building 103F Electrical Vault 1	Top of Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	120.00	µg/ft^2	
			Cadmium	2.64	µg/ft^2	27.9/1.9
			Chromium	11.00	µg/ft^2	
			Lead	63.20	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
103F-1-2	Building 103F Electrical Vault 1	Concrete Floor - Lower Level	Silver	3.53	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	129.00	µg/ft^2	
			Cadmium	4.80	µg/ft^2	27.9/1.9
			Chromium	23.30	µg/ft^2	
			Lead	445.00	µg/ft^2	250/40
			Selenium	3.00	µg/ft^2	
103F-1-3	Building 103F Electrical Vault 1	Transformer (Face) - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	8.10	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	5.56	µg/ft^2	
			Lead	12.40	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-1-1	Building 104 Electrical Vault 1	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	104.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	10.60	µg/ft^2	
			Lead	104.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
104-1-2	Building 104 Electrical Vault 1	Dry Transformer - Upper Level	Silver	7.03	µg/ft^2	139/9.3
			Arsenic	9.90	µg/ft^2	139/9.3
			Barium	412.00	µg/ft^2	
			Cadmium	45.00	µg/ft^2	27.9/1.9
			Chromium	68.00	µg/ft^2	
			Lead	810.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-1-3	Building 104 Electrical Vault 1	Electrical Vault Concrete Floor - Lower Level	Silver	7.03	µg/ft^2	139/9.3
			Arsenic	9.90	µg/ft^2	139/9.3
			Barium	412.00	µg/ft^2	
			Cadmium	45.00	µg/ft^2	27.9/1.9
			Chromium	68.00	µg/ft^2	
			Lead	810.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-1-4	Building 104 Electrical Vault 1	Switchgear 4AB - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	115.00	µg/ft^2	
			Cadmium	7.10	µg/ft^2	27.9/1.9
			Chromium	17.40	µg/ft^2	
			Lead	94.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-2-1	Building 104 Electrical Vault 2	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	97.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	15.20	µg/ft^2	
			Lead	94.70	µg/ft^2	250/40
			Selenium	3.40	µg/ft^2	
104-2-2	Building 104 Electrical Vault 2	Concrete Floor - Lower Level	Silver	4.00	µg/ft^2	139/9.3
			Arsenic	6.26	µg/ft^2	139/9.3
			Barium	254.00	µg/ft^2	
			Cadmium	5.50	µg/ft^2	27.9/1.9
			Chromium	67.20	µg/ft^2	
			Lead	450.00	µg/ft^2	250/40
			Selenium	10.40	µg/ft^2	
104-2-3	Building 104 Electrical Vault 2	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	50.30	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	6.40	µg/ft^2	
			Lead	70.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
104-2-4	Building 104 Electrical Vault 2	Concrete Floor North Side - Lower Level	Silver	7.42	µg/ft^2	139/9.3
			Arsenic	8.90	µg/ft^2	139/9.3
			Barium	380.00	µg/ft^2	
			Cadmium	9.14	µg/ft^2	27.9/1.9
			Chromium	63.00	µg/ft^2	
			Lead	256.00	µg/ft^2	250/40
			Selenium	20.20	µg/ft^2	
104-3-1	Building 104 Electrical Vault 3	Dry Transformer - Upper Level	Silver	5.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	190.00	µg/ft^2	
			Cadmium	4.50	µg/ft^2	27.9/1.9
			Chromium	25.30	µg/ft^2	
			Lead	160.00	µg/ft^2	250/40
			Selenium	4.60	µg/ft^2	
104-3-2	Building 104 Electrical Vault 3	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	90.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	12.70	µg/ft^2	
			Lead	99.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-3-3	Building 104 Electrical Vault 3	Power Panel Board - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	81.10	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	31.20	µg/ft^2	
			Lead	200.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-4-1	Building 104 Electrical Vault 4	Dry Transformer - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	70.50	µg/ft^2	
			Cadmium	93.50	µg/ft^2	27.9/1.9
			Chromium	9.82	µg/ft^2	
			Lead	78.60	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-4-2	Building 104 Electrical Vault 4	Concrete Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	183.00	µg/ft^2	
			Cadmium	4.16	µg/ft^2	27.9/1.9
			Chromium	52.60	µg/ft^2	
			Lead	392.00	µg/ft^2	250/40
			Selenium	4.40	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
104-4-3	Building 104 Electrical Vault 4	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.33	µg/ft^2	139/9.3
			Barium	185.00	µg/ft^2	
			Cadmium	3.35	µg/ft^2	27.9/1.9
			Chromium	50.30	µg/ft^2	
			Lead	400.00	µg/ft^2	250/40
			Selenium	7.90	µg/ft^2	
104-5-1	Building 104 Electrical Vault 5	Dry Transformer - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	200.00	µg/ft^2	
			Cadmium	1.90	µg/ft^2	27.9/1.9
			Chromium	11.00	µg/ft^2	
			Lead	76.30	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-5-2	Building 104 Electrical Vault 5	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	107.00	µg/ft^2	
			Cadmium	5.20	µg/ft^2	27.9/1.9
			Chromium	13.50	µg/ft^2	
			Lead	263.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
104-5-3	Building 104 Electrical Vault 5	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	6.54	µg/ft^2	139/9.3
			Barium	231.00	µg/ft^2	
			Cadmium	11.20	µg/ft^2	27.9/1.9
			Chromium	39.60	µg/ft^2	
			Lead	708.00	µg/ft^2	250/40
			Selenium	7.80	µg/ft^2	
105-1-1	Building 105 Electrical Vault 1	Metal Floor - Upper Level	Silver	2.52	µg/ft^2	139/9.3
			Arsenic	4.70	µg/ft^2	139/9.3
			Barium	450.00	µg/ft^2	
			Cadmium	4.15	µg/ft^2	27.9/1.9
			Chromium	42.00	µg/ft^2	
			Lead	325.00	µg/ft^2	250/40
			Selenium	5.73	µg/ft^2	
105-1-2	Building 105 Electrical Vault 1	Transformer - Upper level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	11.70	µg/ft^2	139/9.3
			Barium	176.00	µg/ft^2	
			Cadmium	20.40	µg/ft^2	27.9/1.9
			Chromium	61.30	µg/ft^2	
			Lead	408.00	µg/ft^2	250/40
			Selenium	15.30	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
105-1-3	Building 105 Electrical Vault 1	Transformer - Lower level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	20.70	µg/ft^2	139/9.3
			Barium	394.00	µg/ft^2	
			Cadmium	10.50	µg/ft^2	27.9/1.9
			Chromium	330.00	µg/ft^2	
			Lead	3360.00	µg/ft^2	250/40
			Selenium	36.50	µg/ft^2	
105-1-4	Building 105 Electrical Vault 1	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	4.17	µg/ft^2	139/9.3
			Barium	261.00	µg/ft^2	
			Cadmium	8.10	µg/ft^2	27.9/1.9
			Chromium	33.70	µg/ft^2	
			Lead	260.00	µg/ft^2	250/40
			Selenium	5.20	µg/ft^2	
105-2-1	Building 105 Electrical Vault 2	Concrete Floor - Upper Level	Silver	3.40	µg/ft^2	139/9.3
			Arsenic	8.90	µg/ft^2	139/9.3
			Barium	620.00	µg/ft^2	
			Cadmium	3.40	µg/ft^2	27.9/1.9
			Chromium	47.40	µg/ft^2	
			Lead	844.00	µg/ft^2	250/40
			Selenium	5.02	µg/ft^2	
105-2-2	Building 105 Electrical Vault 2	Transformer - Lower level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	10.30	µg/ft^2	139/9.3
			Barium	80.80	µg/ft^2	
			Cadmium	6.45	µg/ft^2	27.9/1.9
			Chromium	106.00	µg/ft^2	
			Lead	7300.00	µg/ft^2	250/40
			Selenium	15.00	µg/ft^2	
105-2-3	Building 105 Electrical Vault 2	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	6.00	µg/ft^2	139/9.3
			Barium	240.00	µg/ft^2	
			Cadmium	6.20	µg/ft^2	27.9/1.9
			Chromium	33.00	µg/ft^2	
			Lead	243.00	µg/ft^2	250/40
			Selenium	9.46	µg/ft^2	
105-3-1	Building 105 Electrical Vault 3	Dry Transformer - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	384.00	µg/ft^2	
			Cadmium	4.48	µg/ft^2	27.9/1.9
			Chromium	11.30	µg/ft^2	
			Lead	98.40	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
105-3-2	Building 105 Electrical Vault 3	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	4.70	µg/ft^2	139/9.3
			Barium	353.00	µg/ft^2	
			Cadmium	21.50	µg/ft^2	27.9/1.9
			Chromium	46.00	µg/ft^2	
			Lead	555.00	µg/ft^2	250/40
			Selenium	7.50	µg/ft^2	
105-3-3	Building 105 Electrical Vault 3	Transformer (Face) - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	15.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	16.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
105-3-4	Building 105 Electrical Vault 3	Concrete Floor - Lower Level	Silver	8.80	µg/ft^2	139/9.3
			Arsenic	3.15	µg/ft^2	139/9.3
			Barium	254.00	µg/ft^2	
			Cadmium	105.00	µg/ft^2	27.9/1.9
			Chromium	42.40	µg/ft^2	
			Lead	360.00	µg/ft^2	250/40
			Selenium	5.41	µg/ft^2	
105-4-1	Building 105 Electrical Vault 4	Transformer - Upper level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.20	µg/ft^2	139/9.3
			Barium	278.00	µg/ft^2	
			Cadmium	3.80	µg/ft^2	27.9/1.9
			Chromium	28.40	µg/ft^2	
			Lead	252.00	µg/ft^2	250/40
			Selenium	4.64	µg/ft^2	
105-4-2	Building 105 Electrical Vault 4	Concrete Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	273.00	µg/ft^2	
			Cadmium	8.40	µg/ft^2	27.9/1.9
			Chromium	64.50	µg/ft^2	
			Lead	10370.00	µg/ft^2	250/40
			Selenium	3.82	µg/ft^2	
105-4-3	Building 105 Electrical Vault 4	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	4.80	µg/ft^2	139/9.3
			Barium	260.00	µg/ft^2	
			Cadmium	13.00	µg/ft^2	27.9/1.9
			Chromium	73.70	µg/ft^2	
			Lead	1250.00	µg/ft^2	250/40
			Selenium	10.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
105-5-1	Building 105 Electrical Vault 5	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.24	µg/ft^2	139/9.3
			Barium	550.00	µg/ft^2	
			Cadmium	12.30	µg/ft^2	27.9/1.9
			Chromium	35.80	µg/ft^2	
			Lead	340.00	µg/ft^2	250/40
			Selenium	4.90	µg/ft^2	
105-5-2	Building 105 Electrical Vault 5	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.78	µg/ft^2	139/9.3
			Barium	740.00	µg/ft^2	
			Cadmium	3.65	µg/ft^2	27.9/1.9
			Chromium	54.00	µg/ft^2	
			Lead	149.00	µg/ft^2	250/40
			Selenium	5.45	µg/ft^2	
105-5-3	Building 105 Electrical Vault 5	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	9.33	µg/ft^2	139/9.3
			Barium	435.00	µg/ft^2	
			Cadmium	4.30	µg/ft^2	27.9/1.9
			Chromium	110.00	µg/ft^2	
			Lead	212.00	µg/ft^2	250/40
			Selenium	8.30	µg/ft^2	
105-6-1	Building 105 Electrical Vault 6	Concrete Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	125.00	µg/ft^2	
			Cadmium	2.94	µg/ft^2	27.9/1.9
			Chromium	16.80	µg/ft^2	
			Lead	140.00	µg/ft^2	250/40
			Selenium	4.18	µg/ft^2	
105-6-2	Building 105 Electrical Vault 6	Concrete Floor - Lower Level	Silver	5.48	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	168.00	µg/ft^2	
			Cadmium	4.03	µg/ft^2	27.9/1.9
			Chromium	22.70	µg/ft^2	
			Lead	195.00	µg/ft^2	250/40
			Selenium	3.80	µg/ft^2	
105-6-3	Building 105 Electrical Vault 6	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	20.80	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	13.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
107-1-1	Building 107 Electrical Vault 1	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	36.70	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	6.16	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
107-1-2	Building 107 Electrical Vault 1	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	31.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	9.65	µg/ft^2	
			Lead	50.00	µg/ft^2	250/40
			Selenium	4.30	µg/ft^2	
107-1-3	Building 107 Electrical Vault 1	Concrete Floor - SW Side of Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	35.60	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	5.60	µg/ft^2	
			Lead	33.40	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
107-1-4	Building 107 Electrical Vault 1	Transformer (Face) - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	3.24	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
108A-1-1	Building 108A	Concrete Floor West Side	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	330.00	µg/ft^2	
			Cadmium	4.00	µg/ft^2	27.9/1.9
			Chromium	21.50	µg/ft^2	
			Lead	527.00	µg/ft^2	250/40
			Selenium	3.75	µg/ft^2	
108A-1-2	Building 108A	East Side of Containment Floor for TR-1	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.22	µg/ft^2	139/9.3
			Barium	185.00	µg/ft^2	
			Cadmium	2.50	µg/ft^2	27.9/1.9
			Chromium	62.50	µg/ft^2	
			Lead	1024.00	µg/ft^2	250/40
			Selenium	3.00	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
108A-1-3	Building 108A	South Side Face of TR-2	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	11.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	200.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
108A-1-4	Building 108A	Top of 4 Phase Relay	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.50	µg/ft^2	139/9.3
			Barium	211.00	µg/ft^2	
			Cadmium	36.00	µg/ft^2	27.9/1.9
			Chromium	20.70	µg/ft^2	
			Lead	314.00	µg/ft^2	250/40
			Selenium	4.92	µg/ft^2	
108B-1-1	Building 108B	Top of 4 Phase Relay	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	3.74	µg/ft^2	139/9.3
			Barium	144.00	µg/ft^2	
			Cadmium	7.10	µg/ft^2	27.9/1.9
			Chromium	31.70	µg/ft^2	
			Lead	780.00	µg/ft^2	250/40
			Selenium	4.00	µg/ft^2	
108B-1-2	Building 108B	Below TR-2 Middle of Building	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	210.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	46.50	µg/ft^2	
			Lead	4860.00	µg/ft^2	250/40
			Selenium	3.15	µg/ft^2	
108B-1-3	Building 108B	Concrete Floor NE Side	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	470.00	µg/ft^2	
			Cadmium	5.90	µg/ft^2	27.9/1.9
			Chromium	22.00	µg/ft^2	
			Lead	490.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
108B-1-4	Building 108B	North Face of TR-1	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	18.70	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	145.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
110-1-1	Building 110 Electrical Vault 1	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	70.40	µg/ft^2	
			Cadmium	3.64	µg/ft^2	27.9/1.9
			Chromium	9.56	µg/ft^2	
			Lead	183.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
110-1-2	Building 110 Electrical Vault 1	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	70.60	µg/ft^2	
			Cadmium	2.90	µg/ft^2	27.9/1.9
			Chromium	9.70	µg/ft^2	
			Lead	165.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
110-1-3	Building 110 Electrical Vault 1	Transformer - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	52.30	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	3.52	µg/ft^2	
			Lead	42.60	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
110-2-1	Building 110 Electrical Vault 2	Metal Floor - Upper Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	5.25	µg/ft^2	139/9.3
			Barium	284.00	µg/ft^2	
			Cadmium	5.38	µg/ft^2	27.9/1.9
			Chromium	91.00	µg/ft^2	
			Lead	3210.00	µg/ft^2	250/40
			Selenium	8.00	µg/ft^2	
110-2-2	Building 110 Electrical Vault 2	Concrete Floor - Lower Level	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	122.00	µg/ft^2	
			Cadmium	3.13	µg/ft^2	27.9/1.9
			Chromium	19.80	µg/ft^2	
			Lead	233.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
110-2-3	Building 110 Electrical Vault 2	Top of Transformer	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	120.00	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	9.40	µg/ft^2	
			Lead	105.00	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

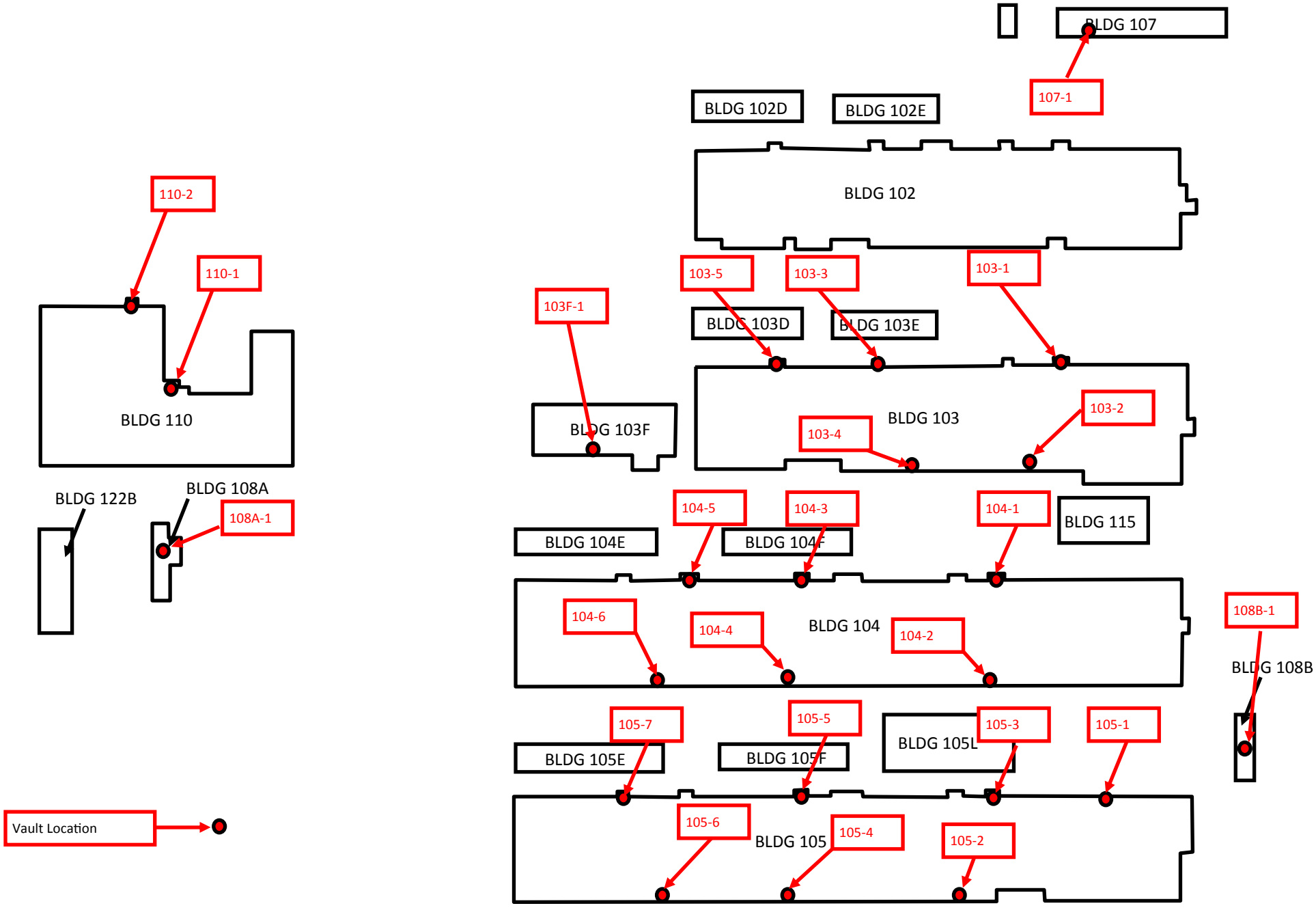
Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
FB-1	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
FB-2	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
FB-3	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
FB-4	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
FB-5	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
FB-6	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limit (*)
FB-7	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	
FB-8	NA	NA	Silver	< 2.50	µg/ft^2	139/9.3
			Arsenic	< 2.50	µg/ft^2	139/9.3
			Barium	< 2.50	µg/ft^2	
			Cadmium	< 2.50	µg/ft^2	27.9/1.9
			Chromium	< 2.50	µg/ft^2	
			Lead	< 2.50	µg/ft^2	250/40
			Selenium	< 2.50	µg/ft^2	

* Recommeded Limits based on Table 3 (BNL Surface Wipe Criteria for Metals) of the Brookhaven Surface Wipe Sampling Procedure (IH75190)

Appendix B

Sample Location Maps


BLDG 107
107-1
BLDG 102D
BLDG 102E
BLDG 102
110-2
110-1
BLDG 110
103-5
103-3
103-1
103F-1
BLDG 103D
BLDG 103E
BLDG 103F
BLDG 103
103-2
103-4
BLDG 122B
BLDG 108A
108A-1
104-5
104-3
104-1
BLDG 115
BLDG 104E
BLDG 104F
104-6
104-4
BLDG 104
104-2
108B-1
BLDG 108B
105-7
105-5
105-3
105-1
BLDG 105E
BLDG 105F
BLDG 105L
105-6
105-4
105-2
BLDG 105
Vault Location

Appendix C

Laboratory Analytical Reports

SanAir Technologies Laboratory

Analysis Report

prepared for

Occu-Tec

Report Date: 9/19/2017
Project Name: Electrical Vault Wipe Sampling
Project #: 917004.002
SanAir ID#: 17035951

NVLAP LAB CODE 200870-0

AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL LEAD ENVIRONMENTAL MICROBIOLOGY ISO/IEC 17025:2005 LAB # 162952

Virginia SBE Certification # 652931

Texas Licensed Mold Analysis Laboratory License # LAB0166

SanAir Technologies Laboratory

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Web: http://www.sanair.com E-mail: iaq@sanair.com

Occu-Tec
100 NW Business Park Lane
Riverside, MO 64150

September 19, 2017

SanAir ID # 17035951
Project Name: Electrical Vault Wipe Sampling
Project Number: 917004.002

Dear Justin Arnold,

We at SanAir would like to thank you for the work you recently submitted. The 80 sample(s) were received on Tuesday, September 12, 2017 via FedEx. The final report(s) is enclosed for the following sample(s): 103-1-1, 103-1-2, 103-1-3, 103-1-4, 103-2-1, 103-2-2, 103-2-3, 103-2-4, 103-3-1, 103-3-2, 103-3-3, 103-4-1, 103-4-2, 103-4-3, 103F-1-1, 103F-1-2, 103F-1-3, 104-1-1, 104-1-2, 104-1-3, 104-1-4, 104-2-1, 104-2-2, 104-2-3, 104-2-4, 104-3-1, 104-3-2, 104-3-3, 104-4-1, 104-4-2, 104-4-3, 104-5-1, 104-5-2, 104-5-3, 105-1-1, 105-1-2, 105-1-3, 105-1-4, 105-2-1, 105-2-2, 105-2-3, 105-3-1, 105-3-2, 105-3-3, 105-3-4, 105-4-1, 105-4-2, 105-4-3, 105-5-1, 105-5-2, 105-5-3, 105-6-1, 105-6-2, 105-6-3, 107-1-1, 107-1-2, 107-1-3, 107-1-4, 108A-1-1, 108A-1-2, 108A-1-3, 108A-1-4, 108B-1-1, 108B-1-2, 108B-1-3, 108B-1-4, 110-1-1, 110-1-2, 110-1-3, 110-2-1, 110-2-2, 110-2-3, FB-1, FB-2, FB-3, FB-4, FB-5, FB-6, FB-7, FB-8.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Abisola Kasali
Metals Laboratory Director
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:
80 sample(s) in Good condition

SanAir Technologies Laboratory

1551 Oakbridge Dr STE B
Powhatan, VA 23139
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Metals & Lead Chain of Custody

Form 70, Revision 9, 01/19/2017

SanAir ID Number: 17035951

Company: OCCU-TEC	Project #: 917004.002	Phone #: 816-810-3276
Address: 100 NW Business Park Lane	Project Name: Electrical Vault Wipe Sampling	Phone #: 816-994-3428
City, St., Zip: Riverside, MO 64150	Date Collected: 9-7-2017	Fax #: 816-994-3478
Samples Collected By: Justin Arnold	P.O. Number:	Email: jarnold@occutec.com
Account #:	U.S. State Collected in: Missouri	Email:

Matrix Types

- [ ] Air (ug/m³)
- [x] Wipe (ug/ft²)
- [ ] Paint [ ] Soil [ ] Bulk (ug/g or ppm)
- [ ] Other:

Metals Analysis Types

- [ ] Total Concentration of Lead
- [x] Total Concentration of RCRA 8 Metals
- [ ] TCLP for Lead
- [ ] TCLP for RCRA 8 Metals
- [ ] ICP-total concentration of metals (please list metals):

Do Not Include Mercury

Turn Around Time	Same Day	1 Day	2 days	3 Days
	[x] Standard (5 day)	[ ] Full TCLP (10d)		

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
103-1-1	7:44 AM	Vault Floor - Upper Level				1 SF
103-1-2	7:48 AM	Top of Cabinet - Upper Level				1 SF
103-1-3	7:53 AM	Vault Floor - Lower Level				1 SF
103-1-4	7:55 AM	Cabinet Lower Level				1 SF
103-2-1	8:36 AM	Vault Floor Concrete - Upper Level				1 SF
103-2-2	8:40 AM	Switch Board #506349 - Upper Level				1 SF
103-2-3	8:45 AM	Vault FLoor Concrete - Lower Level				1 SF
103-2-4	8:48 AM	Switch Gear (Face) - Lower Level				1 SF
103-3-1	8:05 AM	Top of Duct SW Side - Upper Level				1 SF
103-3-2	8:09 AM	Vault Floor - Lower Level				1 SF
103-3-3	8:12 AM	Transformer #508900 - Lower Level				1 SF
103-4-1	8:22 AM	Vault Floor Colncrete - Upper Level				1 SF
103-4-2	8:26 AM	Dry Transformer #500848				1 SF
103-4-3	8:28 AM	Vault Floor Concrete - Lower Level				1 SF

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
	9-11-2017			SEP 12 2017	9:45 AM

If no technician is provided, then the primary contact of your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm will begin at 8 am the next business morning. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the Rush TAT rate. There is a minimum charge of $100 for weekend work. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

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Metals & Lead Chain of Custody

Form 70, Revision 9, 01/19/2017

SanAir ID Number: 17035951

Company: OCCU-TEC	Project #: 917004.002	Phone #: 816-810-3276
Address: 100 NW Business Park Lane	Project Name: Electrical Vault Wipe Sampling	Phone #: 816-994-3428
City, St., Zip: Riverside, MO 64150	Date Collected: 9-7-2017	Fax #: 816-994-3478
Samples Collected By: Justin Arnold	P.O. Number:	Email: jarnold@occutec.com
Account #:	U.S. State Collected in: Missouri	Email:

Matrix Types

- Air (ug/m³)
- ■ Wipe (ug/ft²)
- Paint Soil Bulk (ug/g or ppm)
- Other:

Metals Analysis Types

- Total Concentration of Lead
- Total Concentration of RCRA 8 Metals ■
- TCLP for Lead
- TCLP for RCRA 8 Metals
- ICP-total concentration of metals (please list metals): Do Not Include Mercury

Turn Around Time	Same Day	1 Day	2 days	3 Days
	■ Standard (5 day)	Full TCLP (10d)		

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
103F-1-1	1:38 PM	Top of Transformer - Lower Level				1 SF
103F-1-2	1:41 PM	Concrete Floor - Lower Level				1 SF
103F-1-3	1:43 PM	Transformer (Face) - Lower Level				1 SF
104-1-1	8:56 AM	Metal Floor - Upper Level				1 SF
104-1-2	8:59 AM	Dry Transformer - Upper Level				1 SF
104-1-3	9:02 AM	Vault Concrete Floor - Lower Level				1 SF
104-1-4	9:05 AM	Switchgear 4AB - Lower Level				1 SF
104-2-1	10:02 AM	Metal Floor - Upper Level				1 SF
104-2-2	10:04 AM	Concrete Floor - Lower Level				1 SF
104-2-3	10:07 AM	Transformer - Lower Level				1 SF
104-2-4	10:10 AM	Concrete Floor North Side - Lowere Level				1 SF
104-3-1	9:12 AM	Dry Transformer - Upper Level				1 SF
104-3-2	9:16 AM	Concrete Floor - Lower Level				1 SF
104-3-3	9:19 AM	Power Pannel Board - Lower Level				1 SF

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
	9-11-2017			SEP 12 2017	9:45AM

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Page 2 of 6

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Metals & Lead Chain of Custody

Form 70, Revision 9, 01/19/2017

SanAir ID Number: 17035957

Company: OCCU-TEC	Project #: 917004.002	Phone #: 816-810-3276
Address: 100 NW Business Park Lane	Project Name: Electrical Vault Wipe Sampling	Phone #: 816-994-3428
City, St., Zip: Riverside, MO 64150	Date Collected: 9-7-2017	Fax #: 816-994-3478
Samples Collected By: Justin Arnold	P.O. Number:	Email: jarnold@occutec.com
Account #:	U.S. State Collected in: Missouri	Email:

Matrix Types

Metals Analysis Types

Air (ug/m³)	Total Concentration of Lead	ICP-total concentration of metals (please list metals):
■ Wipe (ug/ft²)	Total Concentration of RCRA 8 Metals ■	Do Not Include Mercury
Paint Soil Bulk (ug/g or ppm)	TCLP for Lead	
Other:	TCLP for RCRA 8 Metals	

Turn Around Time	Same Day	1 Day	2 days	3 Days
	■ Standard (5 day)	Full TCLP (10d)		

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
104-4-1	9:45 AM	Dry Transformer - Upper Level				1 SF
104-4-2	9:47 AM	Concrete Floor - Upper Level				1 SF
104-4-3	9:50 PM	Transformer - Lower Level				1 SF
104-5-1	9:28 AM	Dry Transformer - Upper Level				1 SF
104-5-2	9:33 AM	Metal Floor - Upper Level				1 SF
104-5-3	9:30 AM	Concrete Floor - Lower Level				1 SF
105-1-1	10:46 AM	Metal Floor - Upper Level				1 SF
105-1-2	10:48 AM	Transformer - Upper Level				1 SF
105-1-3	10:52 AM	Transformer - Lower Level				1 SF
105-1-4	10:55 AM	Concrete Floor - Lower Level				1 SF
105-2-1	12:10 PM	Concrete Floor - Upper Level				1 SF
105-2-2	12:13 PM	Transformer - Lower Level				1 SF
105-2-3	12:15 PM	Concrete Floor - Lower Level				1 SF
105-3-1	11:01 AM	Dry Transformer - Upper Level				1 SF

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
	9-11-2017			SEP 12 2017	9:45AM

If no technician is provided, then the primary contact of your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm will begin at 8 am the next business morning. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the Rush TAT rate. There is a minimum charge of $100 for weekend work. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

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Metals & Lead Chain of Custody

Form 70, Revision 9, 01/19/2017

SanAir ID Number: 17035951

Company: OCCU-TEC	Project #: 917004.002	Phone #: 816-810-3276
Address: 100 NW Business Park Lane	Project Name: Electrical Vault Wipe Sampling	Phone #: 816-994-3428
City, St., Zip: Riverside, MO 64150	Date Collected: 9-7-2017	Fax #: 816-994-3478
Samples Collected By: Justin Arnold	P.O. Number:	Email: jarnold@occutec.com
Account #:	U.S. State Collected in: Missouri	Email:

Matrix Types

Air (ug/m³)	
■ Wipe (ug/ft²)	
Paint Soil Bulk (ug/g or ppm)	
Other:	

Metals Analysis Types

Total Concentration of Lead	
Total Concentration of RCRA 8 Metals ■	
TCLP for Lead	
TCLP for RCRA 8 Metals	

ICP-total concentration of metals (please list metals):

Do Not Include Mercury

Turn Around Time	Same Day	1 Day	2 days	3 Days
	■ Standard (5 day)	Full TCLP (10d)		

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
105-3-2	11:05 AM	Metal Floor - Upper Level				1 SF
105-3-3	11:09 AM	Transformer (Face) - Lower Level				1 SF
105-3-4	11:11 AM	Concrete Floor - Lower Level				1 SF
105-4-1	11:55 AM	Transformer - Upper Level				1 SF
105-4-2	11:58 Am	Concrete Floor - Upper Level				1 SF
105-4-3	12:02 PM	Transformer - Lower Level				1 SF
105-5-1	11:18 AM	Metal Floor - Upper Level				1 SF
105-5-2	11:23 AM	Transformer - Lower Level				1 SF
105-5-3	11:25 AM	Concrete Floor - Lower Level				1 SF
105-6-1	11:36 AM	Concrete Floor - Upper Level				1 SF
105-6-2	11:40 AM	Concrete Floor - Lower Level				1 SF
105-6-3	11:42 AM	Transformer - Lower Level				1 SF
107-1-1	1:22 PM	Transformer - Lower Level				1 SF
107-1-2	1:24 PM	Concrete Floor - Lower Level				1 SF

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
	9-11-2017			SEP 12 2017	9:45 AM

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Metals & Lead Chain of Custody

Form 70, Revision 9, 01/19/2017

SanAir ID Number: 17035951

Company: OCCU-TEC	Project #: 917004.002	Phone #: 816-810-3276
Address: 100 NW Business Park Lane	Project Name: Electrical Vault Wipe Sampling	Phone #: 816-994-3428
City, St., Zip: Riverside, MO 64150	Date Collected: 9-7-2017	Fax #: 816-994-3478
Samples Collected By: Justin Arnold	P.O. Number:	Email: jarnold@occutec.com
Account #:	U.S. State Collected in: Missouri	Email:

Matrix Types

- Air (ug/m³)
- Wipe (ug/ft²)
- Paint Soil Bulk (ug/g or ppm)
- Other:

Metals Analysis Types

- Total Concentration of Lead
- Total Concentration of RCRA 8 Metals
- TCLP for Lead
- TCLP for RCRA 8 Metals
- ICP-total concentration of metals (please list metals):

Turn Around Time	Same Day	1 Day	2 days	3 Days
	Standard (5 day)	Full TCLP (10d)		

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
107-1-3	1:26 PM	Concrete Floor - Lower Level SW Side				1 SF
107-1-4	1:28 PM	Transformer (Face) - Lower Level				1 SF
108A-1-1	2:20 PM	Concrete Floor West Side				1 SF
108A-1-2	2:24 PM	East Side of Containment Floor for TR-1				1 SF
108A-1-3	2:28 PM	South Side Face of TR-2				1 SF
108A-1-4	2:32 PM	Top of 4 Phase Relay				1 SF
108B-1-1	1:53 PM	Top of 4 Phase Relay				1 SF
108B-1-2	1:58 PM	Below TR-2 Middle of Building				1 SF
108B-1-3	2:02 PM	Concrete Floor NE Side				1 SF
108B-1-4	2:07 PM	North Face of TR-1				1 SF
110-1-1	3:06 PM	Metal Floor - Upper Level				1 SF
110-1-2	3:10 PM	Concrete Floor - Lower Level				1 SF
110-1-3	3:12 PM	Transformer - Lower Level				1 SF
110-2-1	2:53 PM	Metal Floor - Upper Level				1 SF

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
	9-11-2017			SEP 12 2017	9:45 AM

If no technician is provided, then the primary contact of your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm will begin at 8 am the next business morning. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the Rush TAT rate. There is a minimum charge of $100 for weekend work. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

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Metals & Lead Chain of Custody

Form 70, Revision 9, 01/19/2017

SanAir ID Number: 17035951

Company: OCCU-TEC	Project #: 917004.002	Phone #: 816-810-3276
Address: 100 NW Business Park Lane	Project Name: Electrical Vault Wipe Sampling	Phone #: 816-994-3428
City, St., Zip: Riverside, MO 64150	Date Collected: 9-7-2017	Fax #: 816-994-3478
Samples Collected By: Justin Arnold	P.O. Number:	Email: jarnold@occutec.com
Account #:	U.S. State Collected in: Missouri	Email:

Matrix Types

- Air (ug/m³)
- ■ Wipe (ug/ft²)
- Paint Soil Bulk (ug/g or ppm)
- Other:

Metals Analysis Types

- Total Concentration of Lead
- Total Concentration of RCRA 8 Metals ■
- TCLP for Lead
- TCLP for RCRA 8 Metals
- ICP-total concentration of metals (please list metals):

Turn Around Time	Same Day	1 Day	2 days	3 Days
	■ Standard (5 day)	Full TCLP (10d)		

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
110-2-2	2:56 PM	Concrete Floor - Lower Level				1 SF
110-2-3	2:58 PM	Top of Transformer				1 SF
FB-1	3:30 PM	Field Blank				
FB-2	3:30 PM	Field Blank				
FB-3	3:31 PM	Field Blank				
FB-4	3:31 PM	Field Blank				
FB-5	3:32 PM	Field Blank				
FB-6	3:32 PM	Field Blank				
FB-7	3:33 PM	Field Blank				
FB-8	3:34 PM	Field Blank				

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9-11-2017				

If no technician is provided, then the primary contact of your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm will begin at 8 am the next business morning. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the Rush TAT rate. There is a minimum charge of $100 for weekend work. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

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SanAir ID Number
17035951
Final Report

Name: Occu-Tec
Address: 100 NW Business Park lane
Riverside, MO 64150

Project Number: 917004.002
P.O. Number:
Project Name: Electrical Vault Wipe Sampling

Collected Date: 9/7/2017
Received Date: 9/12/2017 9:45 AM
Report Date: 9/19/2017 1:30PM
Analyst : C. Peterson

Analytes Requested: RCRA 7 Metals
Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-01	103-1-1	Silver (Ag)	Vault Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		270	2.5
		Cadmium (Cd)		5.70	2.5
		Chromium (Cr)		28.0	2.5
		Lead (Pb)		234	2.5
		Selenium (Se)		<2.5	2.5
17035951-02	103-1-2	Silver (Ag)	Top Of Cabinet - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		68.0	2.5
		Cadmium (Cd)		5.48	2.5
		Chromium (Cr)		5.20	2.5
		Lead (Pb)		183	2.5
		Selenium (Se)		<2.5	2.5
17035951-03	103-1-3	Silver (Ag)	Vault Floor- Lower Level	5.20	2.5
		Arsenic (As)		11.3	2.5
		Barium (Ba)		243	2.5
		Cadmium (Cd)		9.60	2.5
		Chromium (Cr)		54.4	2.5
		Lead (Pb)		609	2.5
		Selenium (Se)		12.8	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

SanAir Technologies Laboratory, Inc participates in the certification for environmental Lead as administered by AIHA-ELLAP (Lab Id 162952) and the State of New York-ELAP (Lab Id 11983, and has met the EPA's NLLAP program standards.

Signature: C. Peterson
Date: 9/13/2017

Reviewed:
Date: 9/19/2017

Analytes Requested: RCRA 7 Metals
Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-04	103-1-4	Silver (Ag)	Cabinet Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		182	2.5
		Cadmium (Cd)		10.6	2.5
		Chromium (Cr)		18.5	2.5
		Lead (Pb)		477	2.5
		Selenium (Se)		2.69	2.5
17035951-05	103-2-1	Silver (Ag)	Vault Floor Concrete - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		71.0	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		8.05	2.5
		Lead (Pb)		60.3	2.5
		Selenium (Se)		<2.5	2.5
17035951-06	103-2-2	Silver (Ag)	Switch Board #506349 - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		213	2.5
		Cadmium (Cd)		13.7	2.5
		Chromium (Cr)		20.1	2.5
		Lead (Pb)		1,690	2.5
		Selenium (Se)		4.90	2.5
17035951-07	103-2-3	Silver (Ag)	Vault Floor Concrete - Lower Level	2.60	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		160	2.5
		Cadmium (Cd)		4.30	2.5
		Chromium (Cr)		27.1	2.5
		Lead (Pb)		116	2.5
		Selenium (Se)		4.37	2.5
17035951-08	103-2-4	Silver (Ag)	Switch Gear (Face) - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		11.6	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		12.1	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

SanAir Technologies Laboratory, Inc participates in the certification for environmental Lead as administered by AIHA-ELLAP (Lab Id 162952) and the State of New York-ELAP (Lab Id 11983, and has met the EPA's NLLAP program standards.

Signature: C. Peterson
Date: 9/13/2017

Reviewed:
Date: 9/19/2017

Analytes Requested: RCRA 7 Metals
Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-09	103-3-1	Silver (Ag)	Top Of Duct SW Side - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		330	2.5
		Cadmium (Cd)		17.6	2.5
		Chromium (Cr)		23.4	2.5
		Lead (Pb)		203	2.5
		Selenium (Se)		4.80	2.5
17035951-10	103-3-2	Silver (Ag)	Vault Floor - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		108	2.5
		Cadmium (Cd)		5.90	2.5
		Chromium (Cr)		32.3	2.5
		Lead (Pb)		145	2.5
		Selenium (Se)		4.80	2.5
17035951-11	103-3-3	Silver (Ag)	Transformer #508900 - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		132	2.5
		Cadmium (Cd)		5.34	2.5
		Chromium (Cr)		16.7	2.5
		Lead (Pb)		98.0	2.5
		Selenium (Se)		<2.5	2.5
17035951-12	103-4-1	Silver (Ag)	Vault Floor Concrete - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		62.0	2.5
		Cadmium (Cd)		3.80	2.5
		Chromium (Cr)		13.3	2.5
		Lead (Pb)		94.3	2.5
		Selenium (Se)		<2.5	2.5
17035951-13	103-4-2	Silver (Ag)	Dry Transformer #500848	<2.5	2.5
		Arsenic (As)		2.90	2.5
		Barium (Ba)		330	2.5
		Cadmium (Cd)		23.0	2.5
		Chromium (Cr)		26.0	2.5
		Lead (Pb)		225	2.5
		Selenium (Se)		5.26	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

SanAir Technologies Laboratory, Inc participates in the certification for environmental Lead as administered by AIHA-ELLAP (Lab Id 162952) and the State of New York-ELAP (Lab Id 11983, and has met the EPA's NLLAP program standards.

Signature: C. Peterson
Date: 9/13/2017

Reviewed:
Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-14	103-4-3	Silver (Ag)	Dry Transformer #500848	<2.5	2.5
		Arsenic (As)		3.30	2.5
		Barium (Ba)		182	2.5
		Cadmium (Cd)		18.0	2.5
		Chromium (Cr)		46.0	2.5
		Lead (Pb)		360	2.5
		Selenium (Se)		6.25	2.5
17035951-15	103F-1-1	Silver (Ag)	Top Of Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		120	2.5
		Cadmium (Cd)		2.64	2.5
		Chromium (Cr)		11.0	2.5
		Lead (Pb)		63.2	2.5
		Selenium (Se)		<2.5	2.5
17035951-16	103F-1-2	Silver (Ag)	Concrete Floor - Lower Level	3.53	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		129	2.5
		Cadmium (Cd)		4.80	2.5
		Chromium (Cr)		23.3	2.5
		Lead (Pb)		445	2.5
		Selenium (Se)		3.00	2.5
17035951-17	103F-1-3	Silver (Ag)	Transformer (Face) - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		8.10	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		5.56	2.5
		Lead (Pb)		12.4	2.5
		Selenium (Se)		<2.5	2.5
17035951-18	104-1-1	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		104	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		10.6	2.5
		Lead (Pb)		104	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

SanAir Technologies Laboratory, Inc participates in the certification for environmental Lead as administered by AIHA-ELLAP (Lab Id 162952) and the State of New York-ELAP (Lab Id 11983, and has met the EPA's NLLAP program standards.

Signature: C. Peterson
Date: 9/13/2017

Reviewed:
Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-19	104-1-2	Silver (Ag)	Dry Transformer - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		190	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		21.3	2.5
		Lead (Pb)		125	2.5
		Selenium (Se)		3.63	2.5
17035951-20	104-1-3	Silver (Ag)	Vault Concrete Floor - Lower Level	7.03	2.5
		Arsenic (As)		9.90	2.5
		Barium (Ba)		412	2.5
		Cadmium (Cd)		45.0	2.5
		Chromium (Cr)		68.0	2.5
		Lead (Pb)		810	2.5
		Selenium (Se)		<2.5	2.5
17035951-21	104-1-4	Silver (Ag)	Switchgear 4AB - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		115	2.5
		Cadmium (Cd)		7.10	2.5
		Chromium (Cr)		17.4	2.5
		Lead (Pb)		94.0	2.5
		Selenium (Se)		<2.5	2.5
17035951-22	104-2-1	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		97.0	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		15.2	2.5
		Lead (Pb)		94.7	2.5
		Selenium (Se)		3.40	2.5
17035951-23	104-2-2	Silver (Ag)	Concrete Floor - Lower Level	4.00	2.5
		Arsenic (As)		6.26	2.5
		Barium (Ba)		254	2.5
		Cadmium (Cd)		5.50	2.5
		Chromium (Cr)		67.2	2.5
		Lead (Pb)		450	2.5
		Selenium (Se)		10.4	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson

Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-24	104-2-3	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		50.3	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		6.40	2.5
		Lead (Pb)		70.0	2.5
		Selenium (Se)		<2.5	2.5
17035951-25	104-2-4	Silver (Ag)	Concrete Floor North Side - Lower Level	7.42	2.5
		Arsenic (As)		8.90	2.5
		Barium (Ba)		380	2.5
		Cadmium (Cd)		9.14	2.5
		Chromium (Cr)		63.0	2.5
		Lead (Pb)		256	2.5
		Selenium (Se)		20.2	2.5
17035951-26	104-3-1	Silver (Ag)	Dry Transformer - Upper Level	5.50	2.5
		Arsenic (As)		2.50	2.5
		Barium (Ba)		190	2.5
		Cadmium (Cd)		4.50	2.5
		Chromium (Cr)		25.3	2.5
		Lead (Pb)		160	2.5
		Selenium (Se)		4.60	2.5
17035951-27	104-3-2	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		90.0	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		12.7	2.5
		Lead (Pb)		99.5	2.5
		Selenium (Se)		<2.5	2.5
17035951-28	104-3-3	Silver (Ag)	Power Pannel Board - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		81.1	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		31.2	2.5
		Lead (Pb)		200	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson

Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-29	104-4-1	Silver (Ag)	Dry Transformer - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		70.5	2.5
		Cadmium (Cd)		93.5	2.5
		Chromium (Cr)		9.82	2.5
		Lead (Pb)		78.6	2.5
		Selenium (Se)		<2.5	2.5
17035951-30	104-4-2	Silver (Ag)	Concrete Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		183	2.5
		Cadmium (Cd)		4.16	2.5
		Chromium (Cr)		52.6	2.5
		Lead (Pb)		392	2.5
		Selenium (Se)		4.40	2.5
17035951-31	104-4-3	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		3.33	2.5
		Barium (Ba)		185	2.5
		Cadmium (Cd)		3.35	2.5
		Chromium (Cr)		50.3	2.5
		Lead (Pb)		400	2.5
		Selenium (Se)		7.90	2.5
17035951-32	104-5-1	Silver (Ag)	Dry Transformer - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		200	2.5
		Cadmium (Cd)		1.90	2.5
		Chromium (Cr)		11.0	2.5
		Lead (Pb)		76.3	2.5
		Selenium (Se)		<2.5	2.5
17035951-33	104-5-2	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		107	2.5
		Cadmium (Cd)		5.20	2.5
		Chromium (Cr)		13.5	2.5
		Lead (Pb)		263	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson

Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-34	104-5-3	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		6.54	2.5
		Barium (Ba)		231	2.5
		Cadmium (Cd)		11.2	2.5
		Chromium (Cr)		39.6	2.5
		Lead (Pb)		708	2.5
		Selenium (Se)		7.80	2.5
17035951-35	105-1-1	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		4.70	2.5
		Barium (Ba)		450	2.5
		Cadmium (Cd)		4.15	2.5
		Chromium (Cr)		42.0	2.5
		Lead (Pb)		325	2.5
		Selenium (Se)		5.73	2.5
17035951-36	105-1-2	Silver (Ag)	Transformer - Upper Level	<2.5	2.5
		Arsenic (As)		11.7	2.5
		Barium (Ba)		176	2.5
		Cadmium (Cd)		20.4	2.5
		Chromium (Cr)		61.3	2.5
		Lead (Pb)		408	2.5
		Selenium (Se)		15.3	2.5
17035951-37	105-1-3	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		20.7	2.5
		Barium (Ba)		394	2.5
		Cadmium (Cd)		10.5	2.5
		Chromium (Cr)		330	2.5
		Lead (Pb)		3,360	2.5
		Selenium (Se)		36.5	2.5
17035951-38	105-1-4	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		4.17	2.5
		Barium (Ba)		261	2.5
		Cadmium (Cd)		8.10	2.5
		Chromium (Cr)		33.7	2.5
		Lead (Pb)		260	2.5
		Selenium (Se)		5.20	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-39	105-2-1	Silver (Ag)	Concrete Floor - Upper Level	3.40	2.5
		Arsenic (As)		8.90	2.5
		Barium (Ba)		620	2.5
		Cadmium (Cd)		3.40	2.5
		Chromium (Cr)		47.4	2.5
		Lead (Pb)		844	2.5
		Selenium (Se)		5.02	2.5
17035951-40	105-2-2	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		10.3	2.5
		Barium (Ba)		80.8	2.5
		Cadmium (Cd)		6.45	2.5
		Chromium (Cr)		106	2.5
		Lead (Pb)		7,300	2.5
		Selenium (Se)		15.0	2.5
17035951-41	105-2-3	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		6.00	2.5
		Barium (Ba)		240	2.5
		Cadmium (Cd)		6.20	2.5
		Chromium (Cr)		33.0	2.5
		Lead (Pb)		243	2.5
		Selenium (Se)		9.46	2.5
17035951-42	105-3-1	Silver (Ag)	Dry Transformer - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		384	2.5
		Cadmium (Cd)		4.48	2.5
		Chromium (Cr)		11.3	2.5
		Lead (Pb)		98.4	2.5
		Selenium (Se)		<2.5	2.5
17035951-43	105-3-2	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		4.70	2.5
		Barium (Ba)		353	2.5
		Cadmium (Cd)		21.5	2.5
		Chromium (Cr)		46.0	2.5
		Lead (Pb)		555	2.5
		Selenium (Se)		7.50	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson

Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-44	105-3-3	Silver (Ag)	Transformer (Face) - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		15.0	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		16.0	2.5
		Selenium (Se)		<2.5	2.5
17035951-45	105-3-4	Silver (Ag)	Concrete Floor - Lower Level	8.80	2.5
		Arsenic (As)		3.15	2.5
		Barium (Ba)		254	2.5
		Cadmium (Cd)		105	2.5
		Chromium (Cr)		42.4	2.5
		Lead (Pb)		360	2.5
		Selenium (Se)		5.41	2.5
17035951-46	105-4-1	Silver (Ag)	Transformer - Upper Level	<2.5	2.5
		Arsenic (As)		3.20	2.5
		Barium (Ba)		278	2.5
		Cadmium (Cd)		3.80	2.5
		Chromium (Cr)		28.4	2.5
		Lead (Pb)		252	2.5
		Selenium (Se)		4.64	2.5
17035951-47	105-4-2	Silver (Ag)	Concrete Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		273	2.5
		Cadmium (Cd)		8.40	2.5
		Chromium (Cr)		64.5	2.5
		Lead (Pb)		10,370	2.5
		Selenium (Se)		3.82	2.5
17035951-48	105-4-3	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		4.80	2.5
		Barium (Ba)		260	2.5
		Cadmium (Cd)		13.0	2.5
		Chromium (Cr)		73.7	2.5
		Lead (Pb)		1,250	2.5
		Selenium (Se)		10.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson Reviewed:

Date: 9/14/2017 Date: 9/19/2017

Analytes Requested: RCRA 7 Metals
Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-49	105-5-1	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		3.24	2.5
		Barium (Ba)		550	2.5
		Cadmium (Cd)		12.3	2.5
		Chromium (Cr)		35.8	2.5
		Lead (Pb)		340	2.5
		Selenium (Se)		4.90	2.5
17035951-50	105-5-2	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		3.78	2.5
		Barium (Ba)		740	2.5
		Cadmium (Cd)		3.65	2.5
		Chromium (Cr)		54.0	2.5
		Lead (Pb)		149	2.5
		Selenium (Se)		5.45	2.5
17035951-51	105-5-3	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		9.33	2.5
		Barium (Ba)		435	2.5
		Cadmium (Cd)		4.30	2.5
		Chromium (Cr)		110	2.5
		Lead (Pb)		212	2.5
		Selenium (Se)		8.30	2.5
17035951-52	105-6-1	Silver (Ag)	Concrete Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		125	2.5
		Cadmium (Cd)		2.94	2.5
		Chromium (Cr)		16.8	2.5
		Lead (Pb)		140	2.5
		Selenium (Se)		4.18	2.5
17035951-53	105-6-2	Silver (Ag)	Concrete Floor - Lower Level	5.48	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		168	2.5
		Cadmium (Cd)		4.03	2.5
		Chromium (Cr)		22.7	2.5
		Lead (Pb)		195	2.5
		Selenium (Se)		3.80	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Date: 9/14/2017

Reviewed:
Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-54	105-6-3	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		20.8	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		13.0	2.5
		Selenium (Se)		<2.5	2.5
17035951-55	107-1-1	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		36.7	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		6.16	2.5
		Selenium (Se)		<2.5	2.5
17035951-56	107-1-2	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		31.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		9.65	2.5
		Lead (Pb)		50.0	2.5
		Selenium (Se)		4.30	2.5
17035951-57	107-1-3	Silver (Ag)	Concrete Floor - Lower Level SW Side	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		35.6	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		5.60	2.5
		Lead (Pb)		33.4	2.5
		Selenium (Se)		<2.5	2.5
17035951-58	107-1-4	Silver (Ag)	Transformer (Face) - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		3.24	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson

Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-59	108A-1-1	Silver (Ag)	Concrete Floor West Side	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		330	2.5
		Cadmium (Cd)		4.00	2.5
		Chromium (Cr)		21.5	2.5
		Lead (Pb)		527	2.5
		Selenium (Se)		3.75	2.5
17035951-60	108A-1-2	Silver (Ag)	East Side Of Containment Floor For TR-1	<2.5	2.5
		Arsenic (As)		3.22	2.5
		Barium (Ba)		185	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		62.5	2.5
		Lead (Pb)		1,024	2.5
		Selenium (Se)		3.00	2.5
17035951-61	108A-1-3	Silver (Ag)	South Side Face Of TR-2	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		11.0	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		200	2.5
		Selenium (Se)		<2.5	2.5
17035951-62	108A-1-4	Silver (Ag)	Top Of 4 Phase Relay	<2.5	2.5
		Arsenic (As)		3.50	2.5
		Barium (Ba)		211	2.5
		Cadmium (Cd)		36.0	2.5
		Chromium (Cr)		20.7	2.5
		Lead (Pb)		314	2.5
		Selenium (Se)		4.92	2.5
17035951-63	108B-1-1	Silver (Ag)	Top Of 4 Phase Relay	<2.5	2.5
		Arsenic (As)		3.74	2.5
		Barium (Ba)		144	2.5
		Cadmium (Cd)		7.10	2.5
		Chromium (Cr)		31.7	2.5
		Lead (Pb)		780	2.5
		Selenium (Se)		4.00	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson

Date: 9/14/2017

Reviewed:

Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-64	108B-1-2	Silver (Ag)	Below TR-2 Middle Of Building	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		210	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		46.5	2.5
		Lead (Pb)		4,860	2.5
		Selenium (Se)		3.15	2.5
17035951-65	108B-1-3	Silver (Ag)	Concrete Floor NE Side	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		470	2.5
		Cadmium (Cd)		5.90	2.5
		Chromium (Cr)		22.0	2.5
		Lead (Pb)		490	2.5
		Selenium (Se)		<2.5	2.5
17035951-66	108B-1-4	Silver (Ag)	North Face Of TR-1	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		18.7	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		145	2.5
		Selenium (Se)		<2.5	2.5
17035951-67	110-1-1	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		70.4	2.5
		Cadmium (Cd)		3.64	2.5
		Chromium (Cr)		9.56	2.5
		Lead (Pb)		183	2.5
		Selenium (Se)		<2.5	2.5
17035951-68	110-1-2	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		70.6	2.5
		Cadmium (Cd)		2.90	2.5
		Chromium (Cr)		9.70	2.5
		Lead (Pb)		165	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

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Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-69	110-1-3	Silver (Ag)	Transformer - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		52.3	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		3.52	2.5
		Lead (Pb)		42.6	2.5
		Selenium (Se)		<2.5	2.5
17035951-70	110-2-1	Silver (Ag)	Metal Floor - Upper Level	<2.5	2.5
		Arsenic (As)		5.25	2.5
		Barium (Ba)		284	2.5
		Cadmium (Cd)		5.38	2.5
		Chromium (Cr)		91.0	2.5
		Lead (Pb)		3,210	2.5
		Selenium (Se)		8.00	2.5
17035951-71	110-2-2	Silver (Ag)	Concrete Floor - Lower Level	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		122	2.5
		Cadmium (Cd)		3.13	2.5
		Chromium (Cr)		19.8	2.5
		Lead (Pb)		233	2.5
		Selenium (Se)		<2.5	2.5
17035951-72	110-2-3	Silver (Ag)	Top Of Transformer	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		120	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		9.40	2.5
		Lead (Pb)		105	2.5
		Selenium (Se)		<2.5	2.5
17035951-73	FB-1	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5

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Date: 9/14/2017

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Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-74	FB-2	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5
17035951-75	FB-3	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5
17035951-76	FB-4	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5
17035951-77	FB-5	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5
17035951-78	FB-6	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Date: 9/14/2017

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Date: 9/19/2017

Analytes Requested: RCRA 7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Ft^2	MRL ug/Sample
17035951-79	FB-7	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5
17035951-80	FB-8	Silver (Ag)	Field Blank	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		<2.5	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		<2.5	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on 2.5ug

Certification

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Signature: C. Peterson Reviewed:

Date: 9/14/2017 Date: 9/19/2017

30 µg/m3 OSHA Action Level (8-hour time weighted average)
50 µg/m3 OSHA Permissible Exposure Limit (General Industry)
50 µg/m3 OSHA Permissible Exposure Limit (Construction)

Dust
10 µg/ft2 HUD Clearance Level for Floors
100 µg/ft2 HUD Clearance Level for Interior Window Sills
100 µg/ft2 HUD Clearance Level for Window Troughs
40 µg/ft2 HUD Clearance Level for Porch Floors

Water
15 ppb (µg/liter) EPA Maximum Containment Level

Paint
0.5% by weight HUD definition of lead based paint
1.0 mg/cm2
5000 ppm

Soil
400 ppm HUD-Play areas and high-contact areas for children

TCLP EPA Limits:
Silver (Ag): 5.0 mg/L
Arsenic (As): 5.0 mg/L
Barium (Ba): 100 mg/L
Cadmium (Cd): 1.0 mg/L
Chromium (Cr): 5.0 mg/L
Mercury (Hg): 0.2 mg/L
Lead (Pb): 5.0 mg/L
Selenium (Se): 1.0 mg/L

Appendix D

Qualifications and Licenses

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Justin E. Arnold

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date:	**6/11/2016**
Expiration Date:	**6/11/2018**
License Number:	**120611-300003622**

Peter Lyskowski
Acting Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102